

ern Reserve University Research Collaboration. *N Engl J Med* 1997; 337:801–8.

3. Rose DN. Short-course prophylaxis against tuberculosis in HIV-infected persons: a decision and cost-effectiveness analysis. *Ann Intern Med* 1998; 129:779–86.
4. Chapman AL, Munkanta M, Wilkinson KA, et al. Rapid detection of active and latent tuberculosis infection in HIV-positive individuals by enumeration of *Mycobacterium tuberculosis*-specific T cells. *AIDS* 2002; 16:2285–93.

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Reply to Hamlyn et al.

TO THE EDITOR—Hamlyn et al. [1] draw attention to the limited impact on the overall number of prevented cases of tuberculosis (TB) if a strategy of screening and treatment of latent TB in HIV-infected patients would be routinely adopted in a setting of low TB prevalence. Assuming a reduction in the number of TB cases of 56% by implementation and following of a screening and preventive treatment strategy in HIV-infected patients, only 3 TB cases per year would have been prevented in their hospital, where only 5% of all TB cases occur among patients with previously diagnosed HIV infection.

Their statement that, in our study, 142 patients had TB before HIV diagnosis is not entirely correct. These patients had TB before they gave consent to be observed in our cohort, but HIV infection may have been diagnosed earlier. The number of patients who had TB before or at the time of diagnosis of HIV infection was 65 [2]. But Hamlyn et al. [1] are correct in pointing out that TB diagnosis or clinical signs of TB are circumstances that lead to the suspicion and diagnosis of HIV infection in a considerable proportion of patients who, therefore, are not eligible for tuberculin skin tests (TSTs) and preventive therapy. Only earlier detection of HIV infection could enable us to prevent TB in a proportion of this population.

The concern of Hamlyn et al. [1] about

the efficiency of a strategy of TB prevention is in concordance with the editorial commentary by Rieder [3] that accompanied our article. A large part of the questionable efficiency results from the difficulties in implementing the TB-prevention strategy, as shown in our cohort, in which certain centers performed TSTs for <40% of patients and in which only 37% of patients with positive TST results received preventive therapy.

Every treatment facility has to decide whether implementing a TB-prevention strategy makes sense in their setting. Our data suggest that preventive chemoprophylaxis is efficacious and effective. Among the individuals with positive TST results, 15 have to be treated to prevent 1 case of TB, and the corresponding number to treat for patients who originate from countries where TB is highly endemic is estimated to be 8. Therefore, we decided to enhance the means of detection and treatment of latent TB in our cohort, because we believe that this strategy is feasible in our setting.

There are several reasons to justify such an approach, even if the absolute number of prevented cases seems to be modest. First, identification and treatment of individuals at high risk of developing TB are crucial public health issues and cornerstones of TB-control policies. Therefore, considering the absolute number of prevented diseases in a cohort study of HIV-individuals does not take into account the potential number of prevented cases that would have been infected by those patients. Second, at an individual level, treatment of active TB carries a higher risk of nonadherence, adverse effects, and drug interactions with antiretrovirals than does preventive treatment [4, 5]. In addition, the risk of immune reconstitution syndrome in HIV-infected individuals after receipt of TB and antiretroviral treatment may lead to considerable morbidity and favors TB-prevention strategies [6–8].

Finally, we do not believe that IFN- γ release assays will accurately identify all HIV-infected patients with latent TB be-

cause of the reduced sensitivity among immunodeficient patients [9]. However, we can expect a higher specificity, leading to a reduced number of patients in need of preventive therapy—especially among persons who have been vaccinated with bacille Calmette-Guérin [10].

Therefore, we think that screening HIV-infected patients for latent TB with TSTs or, possibly, IFN- γ release assays and treating those patients with suspected latent TB is an advisable strategy to reduce TB-related morbidity, even in the setting of a low TB prevalence.

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References

1. Hamlyn E, Childs K, Post FA. Reducing tuberculosis incidence in HIV-infected patients by tuberculin skin testing, preventive treatment, and antiretroviral therapy [letter]. *Clin Infect Dis* 2007; 44:1393–4 (in this issue).
2. Elzi L, Schlegel M, Weber R, et al. Reducing tuberculosis incidence by tuberculin skin testing, preventive treatment, and antiretroviral therapy in an area of low tuberculosis transmission. *Clin Infect Dis* 2007; 44:94–102.
3. Rieder HL. Preventing latent tuberculosis among HIV-infected patients: efficacious and effective, yet inefficient? *Clin Infect Dis* 2007; 44:103–4.
4. Saukkonen JJ, Cohn DL, Jasmer RM, et al. An official ATS statement: hepatotoxicity of antituberculosis therapy. *Am J Respir Crit Care Med* 2006; 174:935–52.
5. Dworkin MS, Adams MR, Cohn DL, et al. Factors that complicate the treatment of tuberculosis in HIV-infected patients. *J Acquir Immune Defic Syndr* 2005; 39:464–70.
6. Lawn SD, Bekker LG, Miller RF. Immune reconstitution disease associated with mycobacterial infections in HIV-infected individuals receiving antiretrovirals. *Lancet Infect Dis* 2005; 5:361–73.
7. Hirsch HH, Kaufmann G, Sendi P, Battegay M. Immune reconstitution in HIV-infected patients. *Clin Infect Dis* 2004; 38:1159–66.
8. Furrer H, Malinverni R. Systemic inflammatory reaction after starting highly active antiretroviral therapy in AIDS patients treated for extrapulmonary tuberculosis. *Am J Med* 1999; 106:371–2.
9. Pai M, Lewinsohn DM. Interferon-gamma assays for tuberculosis: is anergy the Achilles'

heel? Am J Respir Crit Care Med **2005**;172: 519–21.

10. Pai M, Riley LW, Colford JM Jr. Interferon-gamma assays in the immunodiagnosis of tuberculosis: a systematic review. Lancet Infect Dis **2004**; 4:761–76.

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